

WV SURFACE MINE DRAINAGE TASK FORCE SYMPOSIUM PAPER INFO:

TITLE: APPLICATION OF EXPERT SYSTEM TECHNOLOGY TO ASSIST IN THE EVALUATION OF PROBABLE HYDROLOGIC IMPACTS OF COAL MINING IN THE APPALACHIAN COAL BASIN AUTHORS:ROBERT S. EVANS AND ALFRED E. WHITEHOUSE

ABSTRACT: THE OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT (OSM), WITH THE ASSISTANCE OF THE HYDROLOGY STEERING COMMITTEE, CREATED BY THE KENTUCKY SETTLEMENT AGREEMENT, HAS DESIGNED AND DEVELOPED AN OPERATIONAL PROTOTYPE OF AN EXPERT SYSTEM. AN EXPERT SYSTEM IS A COMPUTER BASED TOOL WHICH ENABLES USERS TO BENEFIT FROM KNOWLEDGE AND EXPERIENCE OF EXPERTS IN A FIELD. THIS OPERATIONAL PROTOTYPE IS INTENDED TO ASSIST MINING PERMIT APPLICANTS IN SUBMITTING AND PERMIT REVIEWERS IN EVALUATING MINING PERMIT APPLICATIONS IN DIFFERENT HYDROGEOLOGIC SETTINGS. THIS PROTOTYPE IS NOW AVAILABLE FOR TESTING AND VALIDATION PRIOR TO THE DEVELOPMENT OF A FULLY OPERATIONAL VERSION. OSM ENVISIONS THAT REGULATORY AUTHORITIES WILL USE SYSTEMS LIKE THIS ONE TO EXPEDITE PERMIT REVIEWS AND ENSURE CONSISTENCY IN THE PERMIT REVIEW PROCESS. OPERATORS WOULD BE ABLE TO EVALUATE THEIR OWN APPLICATIONS BEFORE SUBMISSION TO ENSURE THEIR COMPLETENESS AND TECHNICAL ACCURACY.

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